RATE OF EMPLOYER CONTRIBUTION FOR THE ALTERNATE RETIREMENT PROGRAM

RECOMMENDATIONS TO THE GOVERNOR AND THE GENERAL ASSEMBLY UNDER ACT 112 OF 1992

Public Employee Retirement Commission
Commonwealth of Pennsylvania
October, 1994

Report to the
General Asembly and Governor of the
Commonwealth of Pennsylvania

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PUBLIC EMPLOYEE RETIREMENT COMMISSION

Executive Director: Anthony W. Salomone

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COMMONWEALTH OF PENNSYLVANIA
PUBLIC EMPLOYEE RETIREMENT COMMISSION
HARRISBURG
17120

October, 1994

To: Governor Casey and
Members of the Pennsylvania General Assembly

Under section 5301(a)(12) of the State Employees' Retirement Code, certain employees of State higher education institutions are authorized to participate in a retirement program other than the State Employes' Retirement System. The section specifies the rate of employer contribution to the alternate retirement program.

Section 5 of the act of November 30, 1992, (P.L. 737, No. 1992-112) directs the Public Employee Retirement Commission to study the rate of employer contribution to the alternate retirement program at this point in time and to recommend an employer contribution rate for the period commencing with Fiscal Year 1995-96. In response to this statutory mandate, the Commission submits the accompanying report and recommends that the employer contribution rate be set at 10.52 percent of payroll for Fiscal Year 1995-96 and for the following four years.

On behalf of the Public Employee Retirement Commission, I am pleased to submit this report to assist you in considering this issue.

Sincerely,

Dale D. Stone

Dale D. Stone
Chairman

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EXECUTIVE SUMMARY

The State Employees' Retirement Code was amended by Act 112 of 1992 to set the employer contribution rate at 9.29 percent of payroll beginning in Fiscal Year 1992-93 for employees who have elected membership in an alternate retirement program approved by the employer. Section 5 of the act directs the Public Employee Retirement Commission to study the employer contribution rate in 1994 and to make a recommendation regarding the rate's continuance or modification to the Governor and the General Assembly.

In response to the mandate of Act 112 of 1992, the Commission has studied the employer contribution rate for the alternate retirement program and presents this report. The report provides introductory information on the purpose of the study, the history of the Commonwealth's participation in optional alternate retirement programs, a discussion on the primary difference between the alternate retirement program and the State Employes' Retirement System program, and the history of employer contribution rates for the alternate retirement program. The report analyzes the determination of valid long-term actuarial assumptions for use in recommending an employer contribution rate, the calculation of the annual employer contribution rates, and the frequency of Commission studies of and reports on the rate.

The Commission recommends:

That the current practice of establishing a set rate and continuing it without modification for a period of years be continued;

That the period of years for which the set rate recommended in the report be effective without modification or review be five years;

That the contribution rate be reviewed by the Commission at the close of each fifth year to determine whether any modifications are warranted; and

That the contribution rate be set at 10.52 percent of payroll for Fiscal Year 1995-96 and for the following four years.

Draft legislation to implement the Commission's recommendations is included in the report as Appendix C.

I. BACKGROUND

Purpose of Study

The purpose of the study, as set forth in Act 112 of 1992, is to study the contribution rate and recommend an employer contribution rate for the optional alternate retirement program. The criterion specified in the act is that the rate "shall be designed to produce parity of contributions between the alternate retirement program and the State Employes' Retirement System program."

History of Commonwealth Participation in Optional Alternate Retirement Programs

The State Employes' Retirement System (SERS) is the administrator of a cost-sharing multiple-employer retirement system established by the Commonwealth to provide retirement, disability, and death benefits for all employees of state government and certain independent agencies. Membership in SERS is mandatory for most state employees, members and employees of the General Assembly, and certain elected individuals in the executive branch. Certain other employees are not required but are given the option to participate. The annual retirement benefit generally is two percent of the member's high-three year average salary times years of service.

In 1972, State higher education institution employees became eligible to elect coverage under an employer-approved independent retirement program as an alternative to SERS retirement coverage. The statutory provision authorizing the alternative coverage specified that employer contributions to an independent retirement program would be capped at the employer normal contribution rate for SERS, which is actuarially determined on an annual basis. An employee electing coverage under the independent alternate retirement program does not have the option of subsequently changing that election in order to become a member of SERS.

The independent alternate retirement program that has been approved by the employer to provide alternative retirement coverage to State higher education employees is the Teachers' Insurance and Annuity Association/College Retirement Equities Fund (TIAA/CREF). TIAA/CREF is the principal retirement system used nationally throughout the higher education community.

History of Commonwealth Participation in Optional Alternate Retirement Programs (CONT'D)

The following summarized,"by organization, the number of State employees currently participating in TIAA/CREF, the total number of State employees, and the participation rate in TIAA/CREF:

Organization	Number of Employees Participating in TIAA/CREF	Total Number o f State Employees	Participation Rate in TIAA/CREF
The Pennsylvania State University	8,548	16,945	50.45%
State System of Higher Education	3,043	10,448	29.13%
Department of Education	44	1,149	3.83%
Total	11,635	28,542	

Both The Pennsylvania State University and the State System of Higher Education have experienced significantly increased membership in TIAA/CREF. The following summarizes, by organization and year, the number of state employees participating in TIAA/CREF both in absolute numbers and as a percentage of all employees in the organization.

Organization	1991 Report		1994 Report	
	Number	Percent	Number	Percent
The Pennsylvania State University	6,238	41.9%	8,548	50.5%
State System of Higher Education	2,545	22.9%	3,043	29.1%

Comparison of Defined Contribution and Defined Benefit Plans

The two pension plans with which this study is concerned are representative of the two broad types of benefit plans. The State Employees' Retirement Code provides for a defined benefit plan. The TIAA/CREF plan is a defined contribution plan. Among the distinguishing aspects between the two types of plans are the elements that are fixed or variable and who bears the risk of investment earnings that are above or below those anticipated.

Comparison of Defined Contribution and Defined Benefit Plans (CONT'D)

In a defined benefit plan, the amount of the eventual pension benefit is fixed based on a predetermined benefit formula and the financing of the plan is dependent of the actuarial funding method. The actuarial funding method provides a systematic plan for accumulating assets that will be adequate to pay the pension benefits that have been promised. The system and, ultimately, the employer bear the investment earnings risk. If earnings are greater than anticipated, there will be a reduction in future employer contributions, and if the earnings are less than anticipated, there will be an increase in future employer contributions.

In a defined contribution plan, the financing of the pension plan is fixed as a set dollar amount or percentage of pay, and the amount of the eventual pension benefit is variable. The amount of the pension benefit is dependent chiefly on the amount of financing, including contributions and investment earnings, available at retirement to fund the benefit. The employee bears the investment earnings risk. Two employees with identical service, salary, and contribution histories may receive two different pensions based upon the investment alternatives that they select.

For a defined contribution plan, the actual financing provided to the plan has a direct impact on the amount of the benefit that will be paid at retirement. For a defined benefit plan, the employee's benefit is not affected by the actual financing provided to the plan. The financing is actuarially determined based on an actuarial cost method and assumptions concerning expected future economic and demographic occurrences. If the financing that is provided is determined to have been more than adequate or less than adequate due to actual experience differing from experience expected under the assumptions, actuarial adjustments are made through the recognition of actuarial gains or losses. None of these actuarial adjustments impacts on the amount of the ultimate benefit payable to the employee, which is pre-established based on the benefit formula.

History of Employer Contributions to TIAA/CREF

Under the alternative retirement coverage that was first authorized in 1972, employer contributions on behalf of employees covered by the TIAA/CREF plan were limited to the employer normal cost rate for SERS, During the first 13 years of the alternate retirement program, employer contributions based on the actuarially determined employer normal cost rate for SERS ranged from 6.42 percent of payroll in 1985-86 to 7.9 percent of payroll in 1980-81, with an average contribution rate of 7.08 percent for the period.

History of Employer Contributions to TIAA/CREF (CONT'D)

Based on the results of the December 31, 1985, actuarial valuation of SERS, the actuarially calculated employer normal cost rate decreased from 6.42 percent in the prior year to 3.6 percent. This would have resulted in a sharp reduction in the employer contribution rate to TIAA/CREF permitted for the 1986-87 fiscal year.

Because the TIAA/CREF retirement plan is a defined contribution plan under which the amount of the benefit at retirement is wholly dependent on the amount of contributions and investment earnings that have accumulated to purchase the benefit, the substantial reduction in the contributions would have had a permanent impact on the ultimate benefit that an employee would have received under the plan. By contrast, the SERS retirement plan is a defined benefit plan under which an employee is entitled to a set benefit. The amount of contributions to the plan serve as a means of pre-funding the expected benefits, are subject to actuarial adjustment if determined to be too much or too little, and do not affect the employee's entitlement to the promised benefit amount.

Act 176 of 1986 was enacted to prevent the substantial reduction in employer contributions to TIAA/CREF for the 1986-87 fiscal year that would have resulted under the prior procedure. As an immediate measure of relief for employees affected by the program, the rate for the 1986-87 fiscal year was set at seven percent of payroll. The seven percent rate approximated the average employer normal contribution rate over the 13-year history of the alternate retirement program.

CHART I

History of Commonwealth Employer Contribution Rates to TIAA/CREF

Fiscal Year	Rate as a % of Payroll	Fiscal Year	Rate as a % of Payroll
1973-74	7.32%	1984-85	6.85%
1974-75	7.30%	1985-86	6.42%
1975-76	6.64%	1986-87	7.00%
1976-77	6.64%	1987-88	8.95%
1977-78	6.64%	1988-89	8.95%
1978-79	7.65%	1989-90	8.95%
1979-80	7.85%	1990-91	8.95%
1980-81	7.90%	1991-92	8.95%
1981-82	6.50%	1992-93	9.29%
1982-83	7.83%	1993-94	9.29%
1983-84	6.54%	1994-95	9.29%

History of Employer Contributions to TIAA/CREF (CONT'D)

Act 176 also directed the Public Employee Retirement Commission to "undertake a study to ascertain the most appropriate method to set annual employer contribution rates to optional alternate retirement programs so as to ensure parity between employer contribution rates to the State Employes' Retirement System and alternate employee retirement programs." As a result of the Commission's March 1987 report, Act 78 of 1987 was adopted fixing the rate at 8.95 percent for five years and directing the Commission to make a similar study at the end of that period. As a result of the Commission's October 1991 report, Act 112 of 1992 was adopted, fixing the rate at 9.29 percent for three years and directing the Commission to make a similar study at the end of that period.

II. ANALYSIS AND DISCUSSION

Determination of Valid Long-term Actuarial Assumptions

Stability of Cost Over Time

In its March 1987 report, the Commission concluded that the utilization of the employer normal cost rate for SERS may produce unstable and uneven employer contributions to the optional alternate retirement program. The reason for the conclusion was that while the actual self-correcting actuarial process utilized for retirement systems adequately insures proper funding for a defined benefit plan, it may not produce an appropriate funding pattern for a defined contribution plan. The Commission stated that defined benefit retirement systems, using an actuarial funding method, have the flexibility to make funding adjustments to correct for actuarial assumption variations. The occurrence of funding adjustments results in the need to base the employer contribution to the alternate retirement plan on a normal cost rate determined using highly stable long-term assumptions that produce stable and reliable annual contributions.

Economic Actuarial Assumptions

In attempting to develop economic actuarial assumptions that represent the best estimate of future investment income and salary increases, the Commission considers it desirable for each assumption to reflect the same long-term imbedded inflation rate and for each assumption to bear a degree of consistency with long-term historical averages for investment return and salary growth. The Municipal Pension Plan Funding Standard and Recovery Act (Act 205 of 1984) requires that the Public Employee Retirement Commission provide a specific range of economic actuarial assumptions that would be acceptable in preparing the actuarial reports. To assist in the development of proposed regulations specifying the acceptable range of economic actuarial assumptions for municipal retirement system actuarial reports, the Commission convened a panel of its three consulting actuaries that met with the Commission staff to produce proposed regulations on the issue.

The following summarizes the two main economic actuarial assumptions specified by the Commission for use in preparing municipal retirement system actuarial valuations under Act 205.

Economic Actuarial Assumptions (CONT'D)

Interest:	Range of 5 percent to 9 percent (Midpoint of 7 percent)
Salary Increase:	Range of 2 percent to 9 percent (Midpoint of 5.5%)
Maximum Spread Between Interest and Salary:	3 percent (Midpoint of 1.5 percent)

A complete copy of the section of the Commission's regulations specifying the acceptable range of actuarial assumptions is included in Appendix A. An analysis conducted by William A. Reimert of Milliman and Robertson, Inc. in 1987 validated the assumptions used in the Act 205 regulations based on 50-year historical averages of experience. Based on that analysis and other supporting data, the Commission continues to conclude that utilization of the Act 205 assumptions to determine the long-term normal cost rate of SERS meets the objective of producing the desired parity of contribution between SERS program and the alternate retirement program.

Demographic Assumptions

The mortality characteristics of the general population in the United States continue to improve steadily. This gradual decline in the rate of mortality implies longer life expectancies among the retired and higher employer contributions to retirement systems. Even though there are more current published tables, SERS continues to use the 1971 Group Annuity Mortality table. The most recent five year investigation (1986-90) of the actuarial experience of SERS, however, shows that the number of deaths among nondisabled annuitants was 13 percent greater than expected. This is consistent with the most recent five year investigation (1988-92) of the actuarial experience of the over 500 municipal retirement systems in the Pennsylvania Municipal Retirement System, which showed the number of deaths among pensioners was over 18 percent greater than expected. Therefore, the continued use of the 1971 Group Annuity Mortality table in this study was considered appropriate.

Ad Hoc Postretirement Adjustments

The Commonwealth has a history of granting periodic ad hoc postretirement adjustments to retired state employees in amounts approximating one-half of the increase in the consumer price index. Because these increases are granted on an ad hoc basis rather than an automatic basis, they are funded through amortization payment contributions rather than normal cost contributions. In its most recent actuarial valuation report, SERS indicates that it now expects an ad hoc postretirement adjustment every five years.

Ad Hoc Postretirement Adjustments (CONT'D)

Because these ad hoc postretirement adjustments become part of the value of the benefits ultimately provided by the Commonwealth to state employees who are members of SERS, in its March 1987 and October 1991 reports, the Commission included contributions equal to the value of this benefit in its recommendations for employer contributions to TIAA/CREF. This is consistent with the goal of providing parity in employer contributions for both groups of state employees. For purposes of this report, the Commission's consulting actuary used a more refined method of approximating ad hoc postretirement adjustments by reflecting the practice of providing them every five years on a cumulative basis, rather than annually.

Normal Cost Contribution Rates

1987 Normal Cost Contribution Rate

In 1987, the Commission requested that the actuarial consulting firm of Towers, Perrin, Foster and Crosby (TPF&C) prepare a cost estimate based on the economic assumptions specified for actuarial valuations of Pennsylvania's municipal retirement systems. The economic actuarial assumptions, representing the midpoints of each of the ranges specified in the regulations, were:

Investment:	7.0 percent a year
Salary Increase:	5.5 percent a year

The demographic assumptions were approximations to the SERS demographic assumptions. The consulting actuary estimated the cost of pre-funding the additional benefit attributable to post-retirement cost of living increases by reflecting future ad hoc increases in SERS benefits as equal to one-half of future consumer price index (CPI) increases. The assumed increase in the CPI was 3.5 percent.

The resulting normal cost contribution rate recommended by the Commission in 1987 were as follows:

Total Normal Cost	15.20%
Member Contributions	6.25%
Net Employer Cost	**8.95%**

Normal Cost Contribution Rates (CONT'D)

1992 Normal Cost Contribution Rate

In 1991, the Commission requested that the actuarial consulting firm of TPF&C to analyze the established contributions rate for members of the alternate retirement program as required under Act 78 of 1987. In conducting the analysis, the consulting actuary approximated the general methodology employed in the actuarial valuation of SERS as of December 31, 1989, and utilized the long-term economic assumptions developed in the course of the initial study conducted in 1987, which were as follows:

Investment:	7.0 percent a year
Salary Increase:	5.5 percent a year
Consumer Price Index:	3.5 percent a year

Because the current contribution rate established in the initial Commission study reflected the costs of probable ad hoc cost of living adjustments, the consulting actuary's redetermination of the contribution rate equivalent to the SERS normal cost rate also reflected costs attributable to assumed future cost of living adjustments equal to one-half of the future increases in the CPI. The consulting actuary's analysis differed from the initial study by:

a. Adding a provision for cost of living increases for disability annuitants;

b. Adding a provision for the cost of death benefits;

c. Reflecting the broad range of actual population characteristics rather than approximating those characteristics through use of a single typical employee; and

d. Adding a provision for the effect of expected nonvested terminations.

The consulting actuary's analysis indicated that the contribution rate for the alternate retirement program that was equivalent to the normal cost contribution rate for SERS was as follows:

Total Normal Cost	15.54%
Member Contributions	6.25%
Net Employer Cost	**9.29%**

Normal Cost Contribution Rates (CONT'D)

1995 Normal Cost Contribution Rate

In July 1994, the Commission requested the actuarial consulting firm of Towers Perrin, using the same methodology employed in the October 1991 report, to develop an annual employer contribution rate for the alternate retirement plan that produces parity with the employer contributions to SERS as required by Act 112 of 1992. The consulting actuary's work recognized that the statutory requirement of an additional one and one-quarter percent member contribution rate no longer applied and that the SERS consulting actuary now assumes supplemental increases in 1994, 1999, and 2004. In conducting the analysis, the consulting actuary approximated the general methodology employed in the actuarial valuation of SERS as of December 31, 1993, and utilized the long-term economic assumptions developed in the course of the initial study conducted in 1987, which were as follows:

Investment:	7.0 percent a year
Salary Increase:	5.5 percent a year
Consumer Price Index:	3.5 percent a year

In addition, rather than assuming a cost of living increase of one-half of the increase in the consumer price index given annually, the consulting actuary used a more refined method to reflect the periodic ad hoc postretirement adjustments as follows:

Ad Hoc Postretirement Adjustment:	1.75 percent a year, granted every five years on a cumulative basis

Other significant actuarial assumptions included:

Mortality:	1971 Group Annuity Mortality Table
Turnover:	Same rates as those used by SERS actuary
Other Decrements:	Approximation of those used by SERS actuary

Normal Cost Contribution Rates (CONT'D)

The actuary's analysis, which is included in Appendix B, indicates that the contribution rate for the alternate retirement program that is equivalent to the normal cost contribution rate for SERS is as follows:

Total Normal Cost	15.52%
Member Contributions	5.00%
Net Employer Cost	**10.52%**

Frequency of Commission Studies and Reports

Among the Commission's conclusions in its March 1987 report were three involving the frequency of such studies and reports:

> **That a set rate be established and continued without modification for a period of years;**
>
> **That the period of years for which the set rate would be effective without modification or review be not less than five years and not more than ten years; and**
>
> **That the contribution rate be reviewed at the close of each established period of years to determine whether any modifications were warranted.**

Act 78 of 1986 did set a rate for five years and did direct the Commission to restudy the issue at the end of that period. Among the Commission's recommendations in its October 1991 report were three involving the period for which the contribution rate might be valid and the time of making the next study:

> **The current practice of establishing a set rate and continuing it without modification for a period of years be continued;**
>
> **The period of years for which the set rate recommended in [the October 1991] report be effective without modification or review not less than three years and not more than five years; and**
>
> **The contribution rate continue to be reviewed by the Commission at the close of each established period of years to determine whether any modifications are warranted.**

Frequency of Commission Studies and Reports (CONT'D)

Act 112 of 1992 set a rate for three years and directed this study and report at the end of that period.

In its March 1987 report, the Commission concluded that state employees who have elected participation in an optional defined contribution pension plan should be provided with an employer contribution rate that has a measure of stability and predictability and provides for parity in employer contributions from a long-term rather than short-term perspective. The Commission continues to believe that this stability of cost over time is appropriate.

Under section 5902(j) of the State Employees' Retirement Code, every five years the board has its consulting actuary conduct an actuarial experience investigation and evaluation of the system based on data including the mortality, service, and compensation experience during the preceding five years. Modification of the actuarial assumptions, if any, occur in conjunction with the actuarial experience investigation. Therefore, it is most appropriate for the Commission's studies of the employer contribution rate for the alternate retirement program also to be conducted every five years. More frequent studies are not warranted since new experience data are the primary reason for adjustments to the previously determined employer contribution rate.

Proposed legislation to implement the Commission's recommendations regarding the employer contribution rate and periodicity of the associated studies is included in Appendix C.

III. RECOMMENDATIONS

Based upon the foregoing analysis and discussion, the Public Employee Retirement Commission recommends that:

> **The current practice of establishing a set rate and continuing it without modification for a period of years be continued;**
>
> **The period of years for which the set rate recommended in this report be effective without modification or review be five years;**
>
> **The contribution rate continue to be reviewed by the Commission at the close of each five year period to determine whether any modifications in the rate or the method of setting it are warranted; and**
>
> **The contribution rate be set at 10.52 percent of payroll for Fiscal Year 1995-96 and for the following four fiscal years.**

APPENDICES

APPENDIX A

PENNSYLVANIA CODE

TITLE 16, SECTION 203.3

CHAPTER 203. ACTUARIAL AND FINANCIAL REPORTS ON MUNICIPAL EMPLOYE PENSION SYSTEMS

§203.3. Range of economic actuarial assumptions.

(a) *Selection of actuarial assumptions.* The actuarial valuation report shall be prepared using actuarial assumptions selected jointly by the actuary of the municipal pension plan and the governing body of the municipal pension plan. The actuarial assumptions shall represent the best available joint estimate of the actuary and the governing body of future occurrences in the case of each actuarial assumption. The economic actuarial assumptions shall additionally be either within the range for economic actuarial assumptions specified in subsection (b) or accompanied in the actuarial valuation report with the documentation specified in subsection (c) that explains and justifies the choice of one or more assumptions outside of the range.

(b) *Range of economic actuarial assumptions.* No explanatory or justificatory documentation as specified in subsection (c) is required to accompany the actuarial valuation report if the following conditions are met:

(1) Economic actuarial assumptions reflect annual percentage increase amounts.

(2) The actuarial assumption as to interest or investment earnings is not less than 5% or more than 9%.

(3) The actuarial assumption as to salary projection or individual pension plan member salary increase for municipal pension plans with a salary related benefit plan is not greater than the actuarial assumption as to interest or investment earnings and is not less than the amount of the actuarial assumption as to interest or investment earnings reduced by 3%. If the actuarial assumption as to salary projection or individual pension plan member salary increase applicable to the municipal pension plan is in the form of probability rates that differ for various ages, the rate to be used for this comparison shall be calculated by the actuary preparing the report, with appropriate accompanying documentation, and shall be the average rate under the probability table for the ages 30 through 50.

(4) The actuarial assumption as to total covered payroll increase, for a municipal pension plan of a municipality that has been determined to be financially distressed and to which a remedy of delayed implementation of the funding standard under section 607(g) or (h) of the act (53 P. S. § 895.607(g) or (h)) is applicable, is not greater than 4% nor less than .0%.

(5) The actuarial assumption as to inflation, for a municipal pension plan that provides for automatic cost-of-living postretirement adjustments based on increases in the Federal consumer price index or other recognized measure of inflation, is not greater than the amount of the actuarial assumption as to interest or investment earnings reduced by 2% and is not less than the amount of the actuarial assumption as to interest or investment earnings reduced by 5%.

APPENDIX B

CONSULTING ACTUARY'S ANALYSIS

Centre Square East
1500 Market Street
Philadelphia, PA 19102-4790
215 246-6000

Towers Perrin

August 26, 1994

Mr. Anthony W. Salomone
Executive Director
Public Employees Retirement Commission
Post Office Box 1429
Harrisburg, Pennsylvania 17105-1429

RECEIVED
AUG 31 1994
Public Employee Retirement Commission

Dear Tony:

ALTERNATE RETIREMENT PROGRAM -- CONTRIBUTION RATE

Certain school employees may elect membership in an independent retirement program in place of the Pennsylvania State Employees' Retirement System (SERS). This program is an individual account-based (defined contribution) plan. The rate of employer contributions to this alternate plan is limited to an amount deemed equivalent to the employer contribution rate for the SERS. As requested, we have developed a proposed annual employer contribution rate for the alternative retirement plan, which is expressed as a percentage of payroll. The rates reflect approximate entry age normal costs for benefits equal to those provided by SERS, and the SERS participant population.

Results

We have determined the entry age normal cost based on the provisions of the plan applicable to Class A participants, i.e. two percent of three-year average pay per year of service. This rate reflects the amount necessary to fund the benefit assuming contributions are made each year from entry age until presumed retirement. The contribution rate is as follows:

■ Gross normal cost rate	15.52%
■ Member contribution rate	5.00
■ Net normal cost rate	10.52

Actuarial Assumptions

■ Interest	7.00%
■ Salary increases	5.50%
■ Inflation	3.50%

▪ Cost-of-living adjustment	1.75% per year, granted every 5 years on a cumulative basis
▪ Retirement	age 60
▪ Mortality	1971 Group Annuity Mortality Table
▪ Turnover	Same rates as those used by SERS actuary
▪ Other decrements	Approximation of those used by SERS actuary

These results are consistent with an objective of providing an annual contribution rate that approximates the long run employer cost for the SERS program. It should be noted that the results are highly dependent on the assumed retirement date and the economic assumptions employed, particularly that for investment return. The parameters above were selected based on the following:

- The economic assumptions represent the mid-point of the allowable ranges to be used in preparing actuarial valuation reports for Pennsylvania municipal pension plans.

- The assumption as to future cost of living increases (1.75% per year, granted every five years) is generally consistent with the Commonwealth practice of periodic ad hoc retiree increases.

- The assumed retirement age is consistent with that required for unreduced retirement benefits over the long-term (i.e., temporary early retirement subsidies are not considered), and with the assumptions used by the plan's actuary.

- Although the mortality assumption is not the most up-to-date table available for pension plan valuation purposes, it provides a reasonable valuation basis when combined with the fairly conservative economic assumptions employed here. (Mortality rates are not applied before retirement, since the full account value is presumed to be payable as a death benefit, and thus the cost of benefits are unaffected by preretirement deaths.)

In conclusion, the assumptions used in determining the results, considered in aggregate, continue to represent a reasonable view of the long-term cost for providing these benefits.

<u>Conclusion</u>

Based on the above results, a contribution rate of 10.52% can be deemed equivalent to the SERS (Class A) retirement benefit with assumed cost-of-living increases.

Towers Perrin

Towers Perrin performed a similar analysis in 1991. The assumptions utilized were essentially the same as those used for the above pricing. The net normal cost rate has increased from 9.29% to 10.52%, with this result for the most part attributable to the decrease in SERS' member contribution rate from 6.25% to 5.0%.

* * * * * *

Please let us know if we can provide any further assistance on these issues.

Sincerely,

Gerard C. Mingione, FSA

Isabelle A. Côté, FSA

GCM/IAC:cmm

APPENDIX C

DRAFT ENABLING LEGISLATION

AN ACT

Amending Title 71 (State Government) of the Pennsylvania Consolidated Statutes, further providing an employer contribution rate for members of an independent retirement system.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Section 5301(a)(12) of Title 71 of the Pennsylvania Consolidated Statutes is amended to read:

§ 5301. Mandatory and optional membership.

(a) Mandatory membership.—Membership in the system shall be mandatory as of the effective date of employment for all State employees except the following:

* * *

(12) School employees who have elected membership in an independent retirement program approved by the employer, provided that in no case, except as hereinafter provided, shall the employer contribute on account of such elected membership at a rate greater than the employer normal contribution rate as determined in section 5508(b) (relating to actuarial cost method). For the fiscal year 1986-1987 an employer may contribute on account of such elected membership at a rate which is the greater of 7% or the employer normal contribution rate as determined in section 5508(b) and for the fiscal year [1992-1993] <u>1995-1996</u> and all years after that at a rate of [9.29%] <u>10.52%</u>. <u>The Public Employee Retirement Commission shall study the rate and recommend to the Governor and the General Assembly no later than December 1, 1999, and December 1 of each fifth year thereafter a rate for the next five fiscal years. The rate last set shall continue in effect until it is changed. The recommendation of the Public Employee Retirement Commission on the rate of employer contribution shall be designed to produce parity of contributions between the alternate retirement program and the State Employes' Retirement System program.</u>

Section 2. This act shall take effect July 1, 1995.